

Application No.: 09/819,787

Docket No.: 20140-00281-US

AMENDMENTS TO THE CLAIMS

Below is a listing of claims as they presently stand in the application. New claim 39 has been added.

1-18. (Canceled)

19. (Previously Presented) A method for polishing a surface, comprising:
providing on said surface a slurry comprising abrasive particles and an oxidizing agent wherein said oxidizing agent has a static etch rate on metal of less than 1000Å per hour; and wherein the pH of the slurry is about 5 to about 11;
and polishing said surface by contacting it with a polishing pad.

20. (Original) The method of claim 19 wherein said oxidizing agent is present in the composition in amounts of about 1 g/L to about 100 g/L.

21. (Original) The method of claim 19 wherein said abrasive particles are present in the composition in amounts of about 0.2 to about 30% by weight.

22. (Original) The method of claim 19 wherein said oxidizing agent is selected from the group consisting of potassium iodate, sodium iodate and ammonium cerium nitrate, and potassium ferricyanide.

23. (Original) The method of claim 19 wherein said oxidizing agent comprises potassium iodate.

24. (Original) The method of claim 19 wherein said abrasive particles are selected from the group consisting of alumina, silica, zirconia, ceria, titanium dioxide, ferric oxide and mixtures thereof.

Application No.: 09/819,787

Docket No.: 20140-00281-US

25. (Original) The method of claim 19 wherein said abrasive particles have a particle size of about 10 to about 1000 nanometers.

26. (Original) The method of claim 19 wherein said abrasive particles include silica.

27. (Original) The method of claim 19 wherein said slurry is an aqueous slurry.

28. (Original) The method of claim 27 wherein said slurry further contains an organic diluent.

29. (Currently Amended) The method of claim 28 wherein said organic diluent is selected from the group consisting of propylene[[,]] carbonate, methanol, ethanol, ethylene glycol, glycerol and mixtures thereof.

30. (Original) The method of claim 19 wherein said slurry contains an organic diluent.

31. (Original) The method of claim 30 wherein said organic diluent is selected from the group consisting of propylene carbonate, methanol, ethanol, ethylene glycol, glycerol and mixtures thereof.

32. (Original) The method of claim 19 which comprises polishing both metal and dielectric material at substantially the same polishing rate.

33. (Original) The method of claim 32 wherein the ratio of polishing rates of said metal to said dielectric material is about 1:2 to about 2:1.

34. (Original) The method of claim 19 wherein said polishing involves the step of metal CMP which immediately precedes deposition of the next level dielectric for the purpose of removing scratches or reducing the effects of erosion on dense contact pattern areas or both.

Application No.: 09/819,787

Docket No.: 20140-00281-US

35. (Original) The method of claim 19 wherein said polishing comprises removing an adhesion promoting or diffusion barrier layer.

36. (Original) The method of claim 35 wherein said adhesion promoting or diffusion barrier layer is at least one material selected from the group consisting of titanium, titanium nitride, tantalum and tantalum nitride.

37. (Original) The method of claim 33 wherein said metal is selected from the group consisting of aluminum, copper and tungsten and said dielectric is silicon dioxide.

38. (Original) The method of claim 19 wherein the speed of said pad during said polishing is about 10 to about 150 rpm, and the speed of the wafer carrier is about 10 to about 150 rpm.

39. (New) The method of claim 25 wherein said abrasive particles include silica.